

REMARKS

The Examiner's indication of the allowability of claims 20, 21, 42 and 43 is appreciated. The Examiner's further indication of the allowability of claims 7 to 12, 14 to 18, 29 to 34, 36 to 40, if rewritten in independent form, is acknowledged and appreciated.

The present invention relates to an integrated connection admission control (CAC) and bandwidth on demand control (BoD) system. Claims 1, 13 and 23 have been amended to clarify the purpose of the CAC and BoD. In summary, the CAC accepts or denies requests for new virtual connections (VCs) and is usually operated once, at the beginning of a new connection. In contrast, the BoD responds to requests for resource made by a terminal. It should be noted that resources are either static (remaining fixed for the duration of a connection or until other connections are set up or released) or dynamic (resource varies according to what the terminal requests at any particular time).

The Examiner has rejected claims 1 to 6, 13, 19, 22 to 28, 35, 41 and 42 under 35 USC § 102(e) as being anticipated by Davis. Reconsideration is requested.

Davis shows how to set weight values at a point in a network (the output of a switch) where there are a number of queues. Davis teaches (see col 5, lines 8-42) how the CAC calculates values for a "transient bandwidth trBW" and "steady-state bandwidth ssBW" based on the type of traffic which is to be accepted and then downloads these values to WFQ control.

Firstly, it should be noted that Davis does not distinguish between static and dynamic resources. At section 1, third paragraph, of his action, the Examiner appears to be equating the features of "static resource" and "dynamic resource" of claims 1, 13, 23 and 35 with the features of steady-state bandwidth and transient bandwidth

disclosed in Davis. These are quite different. Davis uses ssBW and trBW as a way of defining an amount of bandwidth required for different types of traffic. There is no suggestion, in Davis, that ssBW and trBW represent types of resource which are allocated on a static or dynamic basis.

Secondly, Davis lacks any feature which equates to, or is equivalent to, the BoD system set forth in claims 1, 13 and 23. Davis does not describe a system where terminals request dynamic resource during an established connection, and are granted an amount of resource in response to that request. In contrast, in Davis traffic arrives at the queues without any request for resource, as in most traditional ATM systems, and the only request for resource is that made during call setup with the CAC (see col 4, lines 10-14).

In response to the Examiner's comments in paragraph 4 of section 1, Applicants do not agree that Davis shows "means for allocating dynamic resource to VCs or to groupings of VCs requesting the dynamic resource in such a way that all VCs or groupings of VCs requesting dynamic resource are dynamically allocated requested dynamic resource up to at least the guaranteed dynamic resource which has been booked for them by the CAC." The Examiner is relying upon the passage of Davis at column 6, lines 57-61. However, it is apparent from column 7, lines 3-6 that Davis could operate in a manner in which a new connection is allowed by the CAC specifying a bandwidth demand which cannot be met. Under these circumstances, spare bandwidth is extracted from all queues in equal proportion.

It is submitted that claim 1 is not anticipated by Davis in view of the above remarks and that dependent claims 2 to 6 are also not anticipated and allowable by virtue of their dependency to claim 1. Similarly, the corresponding method claim 23, which has been amended in a similar manner to claim 1, is also allowable and claims 24 to 28, 35 and 41 are allowable by virtue of their dependency on claim 23.

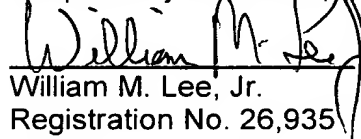
Claim 13 has been amended so as to clarify the purpose of the CAC and BoD in a similar manner to claim 1. Applicants' remarks in relation to the novelty of claim 1 also apply to this claim. Davis only teaches how weights are updated to accommodate a new connection to the network, and not how a BoD system responds to requests for dynamic resource during an established connection. Furthermore, and to reiterate the remarks made earlier in relation to claim 1, Davis does not guarantee an amount of resource to a connection as it discloses how bandwidth is extracted from all existing queues when a connection is accepted and the bandwidth requirement cannot be fulfilled.

Examiner's rejections of dependent claims are considered moot in view of the amendments made to the independent claims and arguments presented here.

For the foregoing reasons, Applicants respectfully submit that the claims in this application are in condition for allowance. Favorable reconsideration and early issuance of a Notice of Allowance are solicited.

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Respectfully submitted,



William M. Lee, Jr.
Registration No. 26,935
Barnes & Thornburg
P.O. Box 2786
Chicago, Illinois 60690-2786
(312) 368-6620
(312) 368-0034 (fax)

Version With Markings To Show Changes Made

1. (currently amended) An integrated connection admission control (CAC) and bandwidth on demand control (BoD) system for allocating the resource of a common medium uplink of a multiple access (MA) asynchronous network segment, wherein:

the CAC is arranged to accept or deny requests for new virtual connections (VCs) on the network segment and comprises means for allocating static resource to all virtual connections (VCs) or groupings of VCs accepted by the CAC and means for booking dynamic resource to the VCs or groupings of VCs that require guaranteed dynamic resource, and

the BoD is arranged to allocate dynamic resource on a request basis during an established virtual connection (VC) and comprises means for allocating dynamic resource in such a way that all VCs or groupings of VCs requesting dynamic resource are dynamically allocated requested dynamic resource up to at least the guaranteed dynamic resource which has been booked for them by the CAC.

13. (currently amended) An integrated connection admission control (CAC) and bandwidth on demand control (BoD) system for allocating the resource of a common medium uplink of a multiple access (MA) asynchronous network segment, wherein:

the CAC is arranged to accept or deny requests for new virtual connections (VCs) on the network segment and comprises means for allocating static resource to all virtual connections (VCs) or groupings of VCs accepted by the CAC and means for booking dynamic resource to the VCs or groupings of VCs that require guaranteed dynamic resource, and

the BoD is arranged to allocate dynamic resource on a request basis during an established virtual connection (VC) and comprises means for allocating

dynamic resource to VCs or to groupings of VCs requesting dynamic resource according to the following rules;

when the requested resource from the VC or group of VCs is less than or equal to the booked dynamic resource for the VC or group of VCs, the BoD allocates the VC or group of VCs all of the requested resource,

when the requested resource from the VC or group of VCs is greater than the booked dynamic resource for the VC or group of VCs, the BoD allocates the VC or group of VCs the booked dynamic resource and additionally the BoD allocates the VC or group of VCs a share of the remainder of the requested resource, from the remaining resource capacity of the common medium uplink.

23. (currently amended) A method integrating a connection admission control (CAC) and a bandwidth on demand control (BoD) for allocating the resource of a common medium uplink of a multiple access (MA) asynchronous network segment, comprising the steps of:

the CAC accepting or denying a request for a new virtual connection (VC) on the network segment,

the CAC allocating static resource to all virtual connections (VCs) accepted by the CAC on a per VC or per grouping of VCs basis,

the CAC booking dynamic resource to the VCs that require guaranteed dynamic resource on a per VC or per group of VCs basis and,

the CAC allocating dynamic resource to VCs or to groupings of VCs requesting dynamic resource during an established VC in such a way that all VCs or groupings of VCs requesting dynamic resource are dynamically allocated requested dynamic resource up to at least the guaranteed dynamic resource which has been booked for them by the CAC